

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
16 October 2008 (16.10.2008)

PCT

(10) International Publication Number
WO 2008/124225 A1

(51) International Patent Classification:
H05B 39/04 (2006.01) **H02M 5/293** (2006.01)

(74) Agent: **OLDS, Theodore W.**; Carlson, Gaskey & Olds, P.C., 400 West Maple Road, Suite 350, Birmingham, MI 48009 (US).

(21) International Application Number:
PCT/US2008/055765

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(22) International Filing Date: 4 March 2008 (04.03.2008)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
11/696,772 5 April 2007 (05.04.2007) US

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant (*for all designated States except US*): **MASCO CORPORATION** [US/US]; 21001 Van Born Road, Taylor, MI 48180 (US).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **XU, Jian** [CA/CA]; 780 Ouellette Avenue, Apt. 76, Windsor, Ont N9A 1C5 (CA). **IOTT, Jeffrey** [US/US]; 7821 Exeter Road, Monroe, MI 48162 (US).

Published:
— with international search report

(54) Title: INDUCTIVE LOAD SENSOR FOR DIMMER CIRCUIT

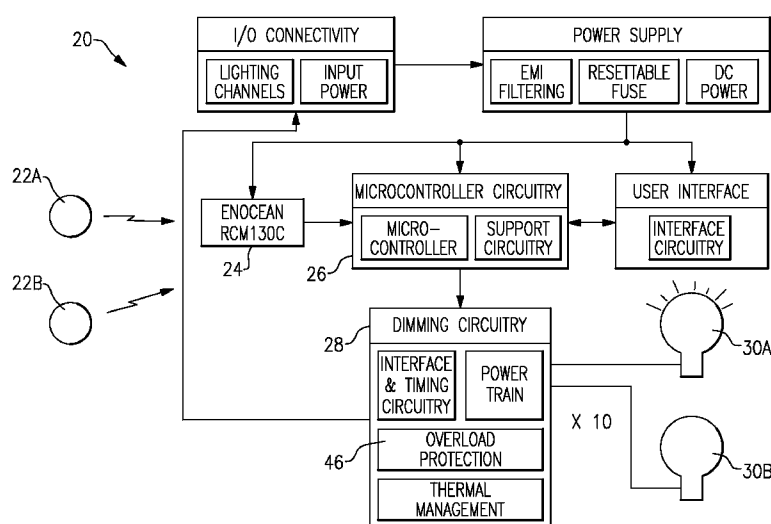


FIG.1

(57) Abstract: A lighting control circuit includes a dimmer circuit which is provided for an electrical outlet. An inductive load detection circuit is provided for identifying the presence of an inductive load in the electrical outlet. When an inductive load is sensed, dimming of the power directed to the electrical outlet is stopped such that full power is delivered to prevent damage to the load. The inductive load detection circuit identifies the presence of an induction load by sensing voltage spikes. In one embodiment, diodes which have a high impedance at lower voltages, but are largely conductive at higher voltages are utilized to achieve this control.